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4. *Vitis inconstans*, Mig. (Japan and Himalayan sp.)

B. Inflorescence thyrsoid, paniculate or rarely racemose; petals cohering into a calyptra which falls at flowering.

a. Leaves more or less hirsute on the veins below, or rarely all smooth.

5. *Vitis vulpina*, L.

b. Leaves all, or at least the younger, densely tomentose on the lower surface.

6. *Vitis Labrusca*, L.

The wonderful tendency of our vines to vary under cultivation seems to belong to them in the wild state, and one who has but a small suite of specimens is likely to be much more positive in his determinations than those who have collections made from widely-separated localities.

Since the above was in type we learn from a note in the *Gardener's Chronicle* that Dr. Regel considers *Vitis vinifera* to be a hybrid between *V. Labrusca* and *V. vulpina*. He bases this opinion upon the fact that *V. vinifera* is not found in a truly wild state, but only as an escape from cultivation, and that these species are natives of the countries where the cultivated grape originated. It may be remembered that our grape growers who have experimented in the production of hybrids have found *V. vulpina* the most intractable of all in this respect.

G. T.

§ 69 Two New Fungi from New Jersey.—Some time ago Mr. J. C. Martindale sent me specimens of the common dodder, *Cuscuta Gronovii* Willd. that were much hypertrophied. Whole clusters of the flowers were swollen and elongated and parts of the stems were much enlarged. The affected clusters were of a paler color than the unaffected, though in some cases the process of decay had advanced so far that the diseased plants had become dark-colored and were supporting a crop of that almost omnipresent blackish mold, *Cladosporium herbarum* Lk. The inner tissues of the affected plants were all broken up, or destroyed, and the cavities filled by innumerable fungus spores, which in the mass were of a whitish color, but under the microscope were seen to consist of a pale or yellowish endochrome surrounded by a thick hyaline epispore. Here was the secret of the strange appearance of the dodder. It was nourishing a parasite within itself that was preying upon its vitals. I do not find the epidermis ruptured in any of the specimens, from which it is probable that the fungus spores must wait for their liberation and dissemination till the decay of the enclosing walls of their habitation takes place. This fungus is referable to the genus *Protomyces*, but is peculiar by reason of the abundant formation of spores in *all parts* of the affected plant.

Deeming it a new species, I take great pleasure in dedicating it to its discoverer.

Protomyces Martindalei Pk.—Host plant swollen, slightly discolored; spores abundant, produced in all parts of the host plant, always covered, globose, whitish in the mass, .0006—.0007 inch in diameter, epispore thick, hyaline.

Hab. Cuscuta Gronovii Willd. Near Camden, New Jersey. Autumn.

Another scarcely less interesting fungus has been received from Mr. J. B. Ellis. It is a *Ræstelia* on the leaves of *Pyrus arbutifolia* L. It is remarkable for its effect upon the leaf tissues, forming them into a much thickened and peculiar subiculum, and, in the language of Mr. Ellis, "often transforming a leaf into a tubercular mass after the manner of *Podisoma* on the red cedar." This subiculum is composed of crowded subcylindrical or cornute projections united at the base in a common mass, each one bearing a single peridium at its apex. I suspect that these projections may be less prominent in fresh specimens. They are strongly suggestive, by their form not their texture, of the elongated peridia of *Ræstelia cornuta* Tul., while the true peridia, that surmount them, are lacerated into such fine filaments as to be suggestive of the peristomal fringe seen on the capsules of some species of *Barbula*. I do not find this fungus described and, from the notes of Mr. Ellis and an examination of the dried specimens, have drawn up a description under the very appropriate name given by its discoverer.

Ræstelia transformans Ellis. — Spots red; subiculum much thickened, produced into tufts of crowded subcylindrical or cornute processes, red or brownish, sometimes transforming an entire leaf; peridia at the apices of the projections of the subiculum, finely lacerated, whitish, the cells linear, minutely papillose; spores subglobose, minutely roughened, brownish, .00065—.00075 inch in diameter.

Hab. Leaves of *Pyrus arbutifolia* L. Newfield, New Jersey. October.

C. H. PECK.

§ 70. New Fungi, by E. C. HOWE, Yonkers, N. Y.

1. *Puccinia curtipes*, n. sp. — Spots pallid or brownish; sori scattered, more or less confluent, roundish or oblong, surrounded by the broken epidermis. Spores light brown, elliptical apiculate, usually marked with delicate striæ. Pedicels short or wanting. Both sides of the leaves of *Saxifraga*. — May. June.

2. *Uromyces Peltandræ*, n. sp. — Spots yellowish brown; sori scattered, sometimes confluent, roundish or oblong; spores yellowish brown, oblong elliptical or subglobose, apiculate or tipped with an umbo. Pedicels short, often rudimentary but always present. Leaves of *Peltandra*. — Summer and Autumn.

3. *Podosphæria minor*, n. sp. — Conceptacles scattered or crowded; appendages 10–20, as long or a little longer than the diameter of the conceptacles. Leaves of *Spiræa*. — Oct.

4. *Microsphæria Symphoricarpi*, n. sp. — Mycelium effused, subpersistent; conceptacles scattered or crowded; appendages 8–16, 2–4 times the length of the diameter of the conceptacles, 3–5 times dichotomous, ramuli divaricate, tips variable, often truncate, never curved, sporangia 4–6 with 3–5 spores. Leaves of *Symphoricarpus*. Nov.

5. *Microsphæria Menispermis*, n. sp. — Mycelium webby, effused, often evanescent; conceptacles scattered or gregarious, minute,